AMENDMENTS TO THE SPECIFICATION:

Page 1, please add the following new paragraphs before paragraph [0001]:

[0000.2] CROSS-REFERENCE TO RELATED APPLICATIONS

[0000.4] This application is a 35 USC 371 application of PCT/DE 2004/001690 filed on July 28, 2004.

[0000.6] BACKGROUND OF THE INVENTION

Please replace paragraph [0001] with the following amended paragraph:

[0001] ~~Prior Art~~ **Field of the Invention**

Please replace paragraph [0002] with the following amended paragraph:

[0002] The invention is ~~based on a~~ **directed to an improved** fuel injection system for an internal combustion engine ~~as generically defined by the preamble to claim 1~~.

Please add the following new paragraph after paragraph [0002]:

[0002.5] Description of the Prior Art

Please replace paragraph [0003] with the following amended paragraph:

[0003] A fuel injection system of ~~this kind is~~ **the type with which this invention is concerned,** known from DE 100 02 132 A1,[[.]] ~~This fuel injection system~~ has a high-pressure pump that delivers fuel to an accumulator. A fuel supply pump ~~is also provided that~~ delivers fuel from a fuel tank to the suction side of the high-pressure pump**, and a fuel metering unit between** [[.]] ~~Between~~ the fuel supply pump and the high-pressure pump[[,]] ~~a fuel metering unit is provided that~~ can variably adjust the quantity of fuel taken in by the high-pressure pump. The accumulator is connected to at least one injector that injects fuel into the internal combustion engine. A fuel return leads from the injector back to the fuel

tank. In order to assure that the high-pressure pump delivers a sufficient supply of fuel to the accumulator in all operating states of the engine, the fuel supply pump must deliver a sufficiently large quantity of fuel to the high-pressure pump. But in order to achieve this, it becomes necessary to provide a fuel supply pump with very large dimensions, which increases the weight and amount of space required of the fuel injection system and also contributes to high manufacturing costs.

Page 2, please replace paragraph [0006] with the following amended paragraph:

[0006] ~~Advantages of the Invention~~

SUMMARY AND ADVANTAGES OF THE INVENTION

Please replace paragraph [0005] with the following amended paragraph:

[0005] The fuel injection system according to the present invention ~~with the characteristics of claim 1~~ has the advantage over the prior art that the fuel supply pump can be of relatively small dimensions, which makes it possible to minimize the space required, weight, and costs of the fuel injection system. Only when the quantity of fuel delivered by the fuel supply pump is less than the required intake quantity of the high-pressure pump does the high-pressure pump also take in additional fuel from the fuel return. This assures that the high-pressure pump takes in predominantly the cool fuel delivered by the fuel supply pump and only the shortfall is made up by the heated fuel from the fuel return.

Please replace paragraph [0006] with the following amended paragraph:

[0006] Advantageous embodiments and modifications of the fuel injection system according to the present invention are disclosed ~~in the dependent claims~~. [[The]] **One** embodiment

~~according to claim 3~~ assures that the high-pressure pump will only take in fuel from the fuel return if the fuel quantity delivered by the fuel supply pump falls short of the required intake quantity. [[The]] **Another** embodiment ~~according to claim 4~~ provides for a lubrication and cooling of the drive region of the high-pressure pump[[.]] ~~The embodiment according to claim 5~~ **while still another** assures that the drive region of the high-pressure pump is supplied exclusively with fuel delivered by the fuel supply pump, i.e. cooler fuel. In [[the]] **a further** embodiment ~~according to claim 8,~~ only the fuel quantity taken in by the high-pressure pump passes through the filter, thus allowing a smaller or simpler filter design to be used.

Page 3, please replace paragraph [0007] with the following amended paragraph:

[0007] ~~Drawings~~ **BRIEF DESCRIPTION OF THE DRAWINGS**

Please replace paragraph [0008] with the following amended paragraph:

[0008] A number of exemplary embodiments of the present invention are ~~shown in the drawings and will be~~ explained in greater detail in the subsequent description[[.]], **taken in conjunction with the drawings, in which:**.

Please replace paragraph [0009] with the following amended paragraph:

[0009] Fig. 1 is a schematic depiction of a first exemplary embodiment of a fuel injection system for an internal combustion engine **according to the invention**,

Please replace paragraph [0012] with the following amended paragraph:

[0012] ~~Description of the Exemplary Embodiment~~

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Please replace paragraph [0013] with the following amended paragraph:

[0013] Figs. 1 to 3 show a fuel injection system for an internal combustion engine, for example of a motor vehicle. The engine is an autoignition internal combustion engine, for example, and has one or more cylinders. The motor vehicle has a fuel tank 10 that stores fuel for the operation of the engine. The fuel injection system has **a** fuel supply pump 12 that delivers fuel from the fuel tank 10 to a high-pressure pump 14. The high-pressure pump 14 delivers fuel to an accumulator 16 that can be embodied, for example, in the form of a tube or in any other shape. At least one line 18 leads from the accumulator 16 to at least one injector 20 associated with a cylinder of the engine; preferably, the accumulator 16 is connected to a number of injectors 20. Each of the injectors 20 is provided with an electric control valve 22 that controls [[an]] **at least one** opening of the respective injector in order to trigger or prevent a fuel injection through the injector 20. An electronic control unit 23 triggers the control valves 22 and, as a function of operating parameters of the engine such as engine speed, load, temperature, etc., determines the time and duration of the fuel injection through the injectors 20. A fuel return for unused fuel leads back from the injectors 20, for example via a line 24 that is shared by all of the injectors 20. A line 26 functioning as a return can also lead from the accumulator 16 back to the fuel tank 10, which line contains a pressure-limiting valve or pressure control valve 28 that prevents an impermissibly high pressure from building up in the accumulator 16 and can vary the pressure prevailing in the accumulator 16. Between the accumulator 16 and the injectors 20, a pressure boosting device 21 can be provided, which further increases the pressure available for fuel injection in comparison to the pressure prevailing in the accumulator 16. The pressure boosting device 21 is preferably

integrated into the injector 20 and is embodied in the form of a hydraulic pressure booster. In this case, the fuel return 24 preferably leads from the pressure booster 21 of the injectors 20.

Page 5, please replace paragraph [0015] with the following amended paragraph:

[0015] The high-pressure pump 14 can be embodied in the form of a radial piston pump and has at least one and possibly several pump elements, each of which has a pump piston that delimits a pump working chamber and is driven into a reciprocating motion by drive shaft. A fuel metering unit 36 is provided between the fuel supply pump 12 and the high-pressure pump 14. The fuel metering unit 36 has a control valve 38 that is actuated, for example, by an electric actuator 37, preferably an electromagnet or a piezoelectric actuator, and can continuously adjust the flow from the fuel supply pump 12 to the high-pressure pump 14. The control valve 38 can be embodied in the form of a proportional valve that can continuously change the flow cross section between the fuel supply pump 12 and high-pressure pump 14. Alternatively, the control valve 38 can also be opened and closed cyclically, which makes it possible to change an average effective flow cross section between the fuel supply pump 12 and the high-pressure pump 14. The fuel metering unit 36 is preferably mounted onto the high-pressure pump 14 or integrated into it, but can also be disposed separate from the high-pressure pump 14. The control unit 23 triggers the fuel metering unit 36 in such a way that the fuel supply pump 12 delivers a fuel quantity to the high-pressure pump 14 that the high-pressure pump 14 then in turn delivers at high pressure to the accumulator 16 in order to maintain a predetermined pressure in the accumulator 16 as a function of operating parameters of the internal combustion engine. The accumulator 16 is

associated with a pressure sensor [[17]] **in the pressure control valve** that is connected to the control unit 23 and supplies it with a signal indicating the current pressure in the accumulator 16.

Page 8, please replace paragraph [0021] with the following amended paragraph:

[0021] The fuel flows through the fuel return segment 24a in different directions depending on the operating state. If the quantity of fuel delivered by the fuel supply pump 12 is less than the required intake quantity of the high-pressure pump 14, then a partial quantity of the fuel quantity flowing back from the injectors [[22]] **20** through the fuel return 24 flows through the fuel return segment 24a in the direction toward the high-pressure pump 14. If the quantity of fuel delivered by the fuel supply pump 12 is greater than the required intake quantity of the high-pressure pump 14, then a partial quantity of the fuel quantity delivered by the fuel supply pump 12 flows through the fuel return segment 24a in the direction toward the pressure valve 42. The fuel return segment 24a thus assures that when the delivery quantity of the fuel supply pump 12 is sufficient, the high-pressure pump 14 only takes in fuel delivered by the fuel supply pump 12 and only when the delivery quantity of the fuel supply pump 12 is insufficient, does the high-pressure pump 14 also take in fuel from the fuel return 24. Only the fuel quantity delivered by the fuel supply pump 12 flows through the filter 30, whereas the fuel quantity drawn from the fuel return 24 is not introduced until after the filter 30. But the excess fuel potentially delivered by the fuel supply pump 12 and diverted via the fuel return segment 24a, the pressure valve 42, and the connection 40 also flows through the filter 30.

Page 10, please replace paragraph [0024] with the following amended paragraph:

[0024] The function of the fuel injection system according to the third exemplary embodiment is essentially the same as in the first and second exemplary embodiments. Fuel flows through the fuel return segment 24a in different directions depending on the operating state. If the fuel quantity delivered by the fuel supply pump 12 is less than the required intake quantity of the high-pressure pump 14, then a partial quantity of the fuel quantity flowing from the injectors [[22]] **20** through the fuel return 24 flows through the fuel return segment 24a in the direction toward the high-pressure pump 14. If the fuel quantity delivered by the fuel supply pump 12 is greater than the required intake quantity of the high-pressure pump 14, then a partial quantity of the fuel quantity delivered by the fuel supply pump 12 flows through the fuel return segment 24a in the direction toward the pressure valve 42. The fuel return segment 24a thus ~~assures~~ **assuring** that if the delivery quantity of the fuel supply pump 12 is sufficient, then the high-pressure pump 14 exclusively takes in fuel delivered by the fuel supply pump 12 and only if the delivery quantity of the fuel supply pump 12 is insufficient, does the high-pressure pump 14 also take in fuel from the fuel return 24. By contrast with the first and second exemplary embodiments, in the third exemplary embodiment, the entire quantity of fuel taken in by the high-pressure pump 14 flows through the filter 30. The excess fuel potentially delivered by the fuel supply pump 12, however, does not flow through the filter 30 because it is diverted via the fuel return segment 24a, the pressure valve 42, and the connection 40 before reaching the filter 30. Only with a sufficient delivery quantity of the fuel supply pump 12 is the fuel quantity delivered to the drive region of the high-pressure pump 14 via the bypass connection 44 diverted exclusively from the cold fuel supply that the

fuel supply pump 12 delivers from the fuel tank 10. When the delivery quantity of the fuel supply pump 12 is insufficient, the fuel quantity delivered to the drive region is drawn from the mixture of the cold fuel that the fuel supply pump 12 delivers from the fuel tank 10 and the heated fuel taken from the fuel return 24. By contrast with the first and second exemplary embodiments, in the third exemplary embodiment, when the delivery quantity of the fuel supply pump 12 is insufficient, the drive region of the high-pressure pump 14 is consequently supplied with fuel at a slightly higher temperature.

Please add the following new paragraph after paragraph [0024]:

[0025] The foregoing relates to preferred exemplary embodiments of the invention, it being understood that other variants and embodiments thereof are possible wherein the spirit and scope of the invention, the latter being defined by the appended claims.